

## **No More High Moment Materials for Magnetic Recording Heads – What Next ?**

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In the disk drive business, longitudinal magnetic recording has been the mainstay technology with areal densities closing in on 100 Gbit/in<sup>2</sup>. The large increase in recording density over the past 20 years has been driven by many technology innovations throughout the whole disk drive system. In the recording head in particular, advances in readback technology with the introduction of MR sensors followed by GMR sensors have been important in the technology ramp. In the writing part of the system, advanced write heads incorporating high moment materials have also been critical. As the opportunity for higher moment materials seems to have ended, the question of where do the technological opportunities exist for continuing the advancement of areal density has reached a point with several potential paths. This talk will discuss the range of opportunities in design, processing, and materials for advanced magnetic recording systems in the future.